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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,062	02/02/2004	Christian Brochu	89003-13	6148
7590	11/16/2005		EXAMINER PASCHALL, MARK H	
SMART & BIGGAR Suite 3400 1000 de la Gauchetiere Street West Montreal, QC H3B 4W5 CANADA			ART UNIT 3742	PAPER NUMBER

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/768,062

Applicant(s)

BROCHU ET AL.

Examiner

Mark H. Paschall

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-67 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 3 and 51-52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 3 there are no further structural limitations nor means /function limitations present which further limit the claimed apparatus. Correction is required. Claim 51 is vague and indefinite in that a single temperature measurement set forth in claim 50, cannot lead to a rate of temperature change since such rate determination would logically need a plurality of temperature measurements, at the least.

### ***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9,12-17,36-39,43-46 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Authier et al 363'. Note that the spa controller set forth in Authier et al does teach in Figures 1,2,5 three series connect actuators 53a,a and 11 which energize and deenergize the heating elements in patterns dependent on multiple factors, which could be in a random occurrence pattern. Hi limit temperature, temperature, water level are among the plurality of parameters effectively utilized by the control system, as per the dependent claims rejected.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Authier et al in view of Huffington. Authier et al teach the claimed subject matter except for showing the deenergization of the actuator used to activate the heating element. One of ordinary skill in the art would find it well within the level of skill in the art to either activate or deactivate a solenoid in a relay to either activate or deactivate a load. Note that Huffington does teach deactivating a solenoid actuator to activate a heating load and in view of this teaching it would have been obvious to modify

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the Authier et al patent to use deactivation in lieu of activation, of an actuator, no patentable persuasion given to any one step over the other, being with the level of ordinary skill in the art of heating control.

Claims 18-25,30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Authier et al in view of Fogagnolo. Authier et al teach the claimed subject matter except for showing use of capacitive level sensing of the fluid level in the Authier et al heating module. Fogagnolo is applied for teaching that it is conventional to use capacitive level sensing in lieu of conventional level sensing in a fluid heating module and in view of this teaching it would have been obvious to modify the Authier et al system to use the same, to produce less corrosion of the sensor and hence the benefit of enhanced longevity of the apparatus .

Claims 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Authier et al in view of Fogagnolo as applied to claims 18-25 and 30-35 above, and further in view of Huffington. Authier et al as modified teaches the claimed subject matter except fro showing deactivating in lieu of activating of an actuator to activate a heating element . As set froth supra, Huffington teaches the same a conventional and in view of this teaching it would have been obvious to modify further et al further to include the same.

Claims 40-42,47-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Authier et al in view of Cline et al 188'. Authier et al teach the claimed subject matter except for showing use of ambient temperature and use of rate of change of the water temperature as control parameters in the claimed spa. Cline et al teach that both ambient temperature and rate of change of water temperature can be used as two of several parameters to effectively control the water temperature in a spa heater and in view of this teaching it would have been obvious to modify Authier et al with the same, to provide enhanced safety by factoring in more control parameters in the control algorithm.

Claims 56-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Authier et al in view of Knepler or Dytch et al. Authier et al teach the claimed subject matter except for showing use of the control switches to further the heating of the system fluid. Both Knepler and Dytch et al show the same as conventional and in view of these teachings it would have been obvious to modify the Authier et al system to include the same, to attain the benefit of reduced power consumption to heat the fluid to a target level. See Knepler , column 4, lines 53-68 and Dytch et al column 8 lines 23-36.

### ***Conclusion***

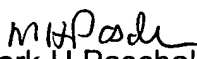
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Russell, Seitz, Tompkins et al, Kemp and Bradenbaugh are cited

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for disclosing fluid heaters of interest to the general invention disclosed. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark H. Paschall whose telephone number is 703 308-1642. The examiner can normally be reached on 7am - 3pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Mark H Paschall  
Primary Examiner  
Art Unit 3742

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